

"A meta-synthesis of pregnant women's decision-making processes with regard to antenatal screening for Down syndrome."

Commentary by One of the Reviewed Authors (Bob Heyman)

Heyman B. (2009) Reflecting on a meta-synthesis of qualitative papers concerned with pregnant women's decision-making about prenatal screening for Down syndrome: A commentary on Reid, Sinclair, Barr, Dobbs and Crealey. *Social Science & Medicine*, **69**, 1574-1576.

I read this paper with great interest for three reasons. Firstly, it promised to draw together qualitative research concerned with pregnant women's perceptions of prenatal screening for chromosomal anomalies such as Down's syndrome. Secondly, the paper offered a practical test of the more general utility of meta-synthesis with qualitative data. Thirdly, the paper which I had first-authored (Heyman *et al.*, 2006) featured among nine winnowed from a starting field of over 12,000. A second paper (Williams *et al.*, 2005) utilising the same data-set was also included among the chosen nine. The remarks which follow will firstly discuss some general issues and secondly comment on the representation of the paper which I first authored.¹

The meta-synthesis presented in this paper appears to have been undertaken meticulously, and written up carefully and critically. I will mention the paper to students wishing to introduce themselves to this way of handling qualitative data. As the authors note, they attempted a difficult task, involving three orders of analysis. Pregnant women, like all service users, actively interpret information they are given. Qualitative researchers interpret these first order interpretations when they select and comment on their research data, itself produced in particular social contexts. Meta-synthesis generate third-order interpretations. (Commentaries such as the present one interpret this output at the fourth level.) The remarks which follow will mostly touch on difficulties and reservations. However, the notes of caution struck should not detract from the promise of this form of building on qualitative findings. It offers a potential means of making qualitative findings cumulative, whilst at the same time raising problematic issues, as the authors themselves note. I outline some issues below before commenting on the treatment of my own paper.

General Comments

The general comments on meta-synthesis offered below cover the following four issues: realism *versus* constructivism; the meta-question; data quality; and multiple social contexts.

Realism *versus* Constructivism: I can't see how meta-synthesis of qualitative studies can be '*firmly rooted in the tenets of a constructivist orientation to epistemology*'. The act of locating diverse studies within a

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common framework implies that a common reality exists to be discovered and distilled from them. If the enterprise of meta-synthesis is to be justified, it must be assumed, firstly, that the primary researchers' interpretations reproduce social actors' interpretations with some truth value; and, secondly, that the meta-synthetic act of putting together these second order interpretations will allow some further truth to be distilled from them. Drawing out the implicitly realist assumptions of methodologies such as grounded theory allows the problems associated with the claim to have discovered 'reality' to be articulated (Hall and Callery, 2001).

The Meta-Question: The meta-synthesis was designed to answer the question, '*What factors influence pregnant women's decisions to accept or decline maternal serum and/or nuchal translucency screening for Down syndrome?*'. Any synthesis of multiple studies must be organised around a common issue, without which studies could not be selected or analysis coherently framed. However, the meta-question might not correspond to the problematics which motivated individual studies, particularly when a theoretical sampling approach is adopted. This style of research seeks to keep the research question open, so that it 'emerges' from the data via cycles of design, data collection and analysis. Heyman *et al.* (2006), for instance, focussed on the role of being at higher risk. Pregnant women's take on this issue could influence their decision to accept or decline screening. But the analysis was not primarily concerned with decision-making.

Assuming that the other paper writers did not necessarily address the meta-synthesis question directly, it follows that data selected and interpreted for one purpose must be used for another. The integrity of meta-synthesis can only be sustained if such adaptations of purpose can be soundly undertaken. Qualitative data does lend itself to this type of re-orientation. But, its limitations need to be acknowledged. In particular, the meta-question is unlikely to map neatly onto the direction of theoretical sampling in the studies which it draws from.

Data Quality: The meta-synthesist needs to select 'good' papers in order to avoid the 'garbage in-garbage out' trap. In this case, the authors relied on a formal framework which assessed features such as sampling strategy, data collection methods, analysis and interpretation and reflexivity, with papers given a summary grade (A-D). Admirably, an audit trail is provided in Table 3, along with the summary grades. (The paper which I first-authored scored a 'B'!) Without being flippant about important issues such as sampling, I have serious doubts as to whether this formal approach captures the worthiness of qualitative research, an issue which the authors acknowledge. Since the aim is usually to discover what exists rather than how much, sampling, however unsystematic, will have worked if it generated data which yield interesting insights. Conversely, a study which did not produce any findings worthy of note might score highly on all the formal measures. (Similarly, skilled use of qualitative software can be, and very often is, combined with meaningless findings.) The importance of grading analysis and interpretation cannot be so easily dismissed, but applying grades begs the question of how their quality is

to be assessed. I suspect that the only way to judge overall study quality is to rely on holistic peer review which itself has obvious weaknesses.

Multiple Social Contexts: The meta-synthesis authors state that their approach generates ‘thick description’. But they rightly note a tension between combining studies and retaining a sense of their social context. The specifics of screening systems vary from place to place, even within a single country such as the UK, and have changed substantially over the two decades since they were introduced as the technology developed. Furthermore, screening sites differ considerably in their organisational ethos. The study from which Heyman *et al.* (2006) derived uncovered substantial differences in the take-up of screening at two comparison research sites using ‘standard’ and ‘innovative’ screening technologies. Women at the innovative site were more likely both to regard prenatal chromosomal screening as routine rather than optional, and to decide to be screened. In theory, such contextual differences can be included in the meta-synthesis, or may be invoked to explain variations in findings. In practice, they are likely to be backgrounded as the synthesisers look for common patterns. At the individual level, this meta-synthesis tended to pick out similarities rather than differences although the authors, to their credit, attempted to do both. This issue will be illustrated in the second part of the commentary which is concerned with the interpretation of the paper which I first-authored.

The Interpretation of Heyman *et al.* (2006)

The meta-synthesis authors offer the following summary of the study findings:

Women declined screening because they wished to avoid anxiety and rejected abortion. Women who screened at higher risk questioned the system-specific probability used to separate them from the lower risk population. Some women experienced distress despite appreciating the precautionary basis of higher risk status. Disengagement from higher risk status was difficult even after diagnostic testing had ruled out chromosomal anomalies.

The summary draws together interpretations which were combined with others in the sections of the meta-synthesis. I find this summary only partly accurate. In fairness, any misunderstandings may well result from the present author’s shortcomings rather than the difficulty inherent in summarising complex analysis.

Women did not necessarily decline screening ‘*because they wished to avoid anxiety **and** rejected abortion*’ (present commentator’s emphasis). Some expressed one OR the other concern. Moreover, the summary does not encompass another important alternative, that of positively framing Down’s syndrome. One woman considered any baby as a ‘gift’ from God. She thereby rejected the presupposition built into risk screening that giving birth to a child with Down’s syndrome is an adverse event. **Some** women rejected the higher/lower risk binary distinction, but others did not. One woman had concealed her pregnancy after screening reduced her pre-screening, age-

based probability of giving birth to a baby with chromosomal anomalies from about 1:100 to 1:249. She took up the offer of diagnostic testing which was made because she just missed the cut-off for lower/higher risk of 1:250. I agree with the statement about **some** women experiencing distress when they were assigned higher risk status. But alternatives outlined in the paper were not mentioned. For example, one screened woman had dismissed a risk of about 1% as low and declined to proceed to diagnostic testing. I suspect that this attitude is relatively unusual, but it has considerable significance for qualitative analysis of interpretive frameworks about risk. Similarly, the paper documents differences in ease of exit from higher risk status after a diagnostic test has demonstrated the absence of chromosomal anomalies. Some women who screen at higher risk find it hard to believe that the health problem screened for never existed, but others shed their higher risk status with ease.

This analysis of meta-analysis in relation to one paper perhaps documents two problems. Firstly, its requirements may lead analysts to preference generality over difference, although the producers of this one clearly acknowledge both. Secondly, meta-analysts are inevitably influenced by their own presuppositions. In this case, I would infer, perhaps incorrectly, that the authors lent towards the following views: that women do not wish to rear a child with Down's syndrome; and that they find the screening/testing system stressful. Both of these propositions frequently hold true, at least in secular societies. But an important strength of qualitative methodology rests in its power to draw attention to instructive exceptions.

CONCLUSION

The qualitative meta-synthesis discussed in this commentary provides a high level, well-executed exemplar of its potential. This approach offers a potential means of building cumulative bodies of qualitative research, thereby addressing one of its main weaknesses. The commentary has highlighted a range of general and specific difficulties which meta-synthesis needs to confront. The nature of the meta-synthetic task may encourage over-reliance on formal methods for judging data quality; a focus on generality rather than difference; and a propensity discount data which do not correspond to the synthesisers' taken-for-granted presuppositions. These problems are not insurmountable.

REFERENCES

Hall. W and Callery. P (2001) Enhancing the rigor of grounded theory: Incorporating reflexivity and relationality. *Qualitative Health Research*, **11**, 257-272.